

September 14, 2021

Exhibit 12

Feral Swine Transboundary Workgroup

Findings and Recommendations

December 1, 2020

Natural resource managers throughout North America have identified feral swine as a significant challenge. This invasive species has emerged as a major environmental and economic concern as populations have exploded. They exist across North America with population estimates over six million. Populations are expanding in the western provinces of Canada and are on the rise in the United States. Existing data from the U.S. and Canada on the distribution of feral swine have confirmed that animals have been detected near the international border and the potential for transboundary movement is very possible.

Western states without established populations have worked vigilantly to prevent introductions or to eradicate feral swine that appear on the landscape. Western states have an opportunity to enhance prevention efforts by partnering with Canadian provinces and each other to discuss challenges and opportunities to preventing and stopping feral swine along interstate and international borders.

In January 2020, staff from the Montana and Washington invasive species councils reached out to U.S. federal, state and Canadian governmental feral swine experts to convene a workgroup aimed at discussing the challenges and opportunities to preventing and stopping feral swine along interstate and international borders (see Appendix A for workgroup members).

On February 21, 2020, the first ever Feral Swine Transboundary Workgroup meeting occurred. During the meeting, members provided an overview of feral swine issues in their respective areas, discussed best practices for management, and began forming preliminary recommendations for enhancing transboundary feral swine management.

The workgroup met again on May 20, 2020, to hear overviews of the [Canadian Invasive Wild Pig Initiative](#) and the [United States Department of Agriculture National Feral Swine Damage Management Program](#), as well as to review and refine recommendations for enhanced transboundary management.

This report contains a summary of the transboundary group's review of five key strategic areas, and contains findings, recommendations and best management practices that federal, state, provincial and local natural resource managers might incorporate into their programs to improve transboundary feral hog management in the western region.

1. Coordination

- a. Identify stakeholders and compile lists of land management agencies, national groups, academics, industry groups, and other stakeholders that are involved in feral swine research, management or response to share best practices and coordinate research and management efforts.
 - i. Beyond the transboundary group that convened initially, other examples include the invasive species working group of the Pacific NorthWest Economic Region (PNWER). PNWER coordinates provincial and state issues through working groups and hosts an annual summit that is a prime venue for including feral swine into its programming. Also, Canada has a national Invasive Wild Pig Initiative, charged with developing a national strategy.
- b. Standardize messaging and communication to the public and develop customized key messages for various distinct audiences. Messaging to recreational hunters will be different than messaging to farmers and ranchers, for example.
 - i. A number of states and provinces have adopted the shared educational campaign, [Squeal on Pigs!](#) to create consistency in messaging across the West.

2. Monitoring

- a. Identify and incorporate feral swine survey and monitoring into ongoing efforts for other species.
 - i. For example, the USDA-APHIS-Wildlife Services surveys coyotes to assess livestock predation. Potentially, feral swine surveys could be added to these efforts.
- b. Expand capacity to monitor populations using measures such as distribution, density, disease testing, and rate of population expansion.
- c. Prioritize, develop, and enhance population distribution maps to identify high-risk areas to focus efforts of prevention and detection.
 - i. Some resources exist to identify high-risk areas and to identify gaps in distribution mapping. Examples include:
 1. [USDA-APHIS History of Feral Swine in the Americas](#)
 2. [Understanding habitat co-occurrence and the potential for competition between native mammals and invasive wild pigs \(*Sus scrofa*\) at the northern edge of their range](#)
 3. Connectivity and corridors: implications for wild pig (*Sus scrofa*) range expansion across the North American prairies (currently under peer review)
- d. Expand monitoring networks by partnering with non-traditional organizations to begin or increase active surveillance, e.g. hunting groups, wildlife organizations, etc.

- e. Augment passive reporting (reports of sightings of feral swine evidence) with active monitoring, particularly in high-risk areas, using tools such as trail cameras, GPS collaring, flying surveys, and direct contact with landowners.
- f. To the extent possible and as resources allow, collecting data on domestic pig operations can benefit surveillance efforts, as escapees can become feral quickly.

3. Reporting and notification

- a. Develop and document reporting and notification protocols. Standardized protocols would ensure that communication and response is streamlined and efficient.
- b. Develop and adopt standard notification information requirements, such as date and time of sighting, number of pigs alive and or dead, spatial location, etc.
- c. State and provincial authorities along the international border should discuss and agree on notification protocols for reports that will be shared cross-border.
 - i. For example, Washington and British Columbia have discussed scenarios that would trigger a report to the respective jurisdiction. In this instance, a report made in a U.S. county that abuts the international border will trigger notification, whereas a notification will be provided to the U.S. if the detection is made within 100 km of the international border.
- d. Following action, including instances where a report resulted in no-action, communicate the resolution and summary of investigation or response actions to notification lists and other applicable parties, e.g. individual who reported the sighting.
- e. As resources allow, exercise notification protocols for the purpose of testing response systems. Use exercise after-action feedback to improve readiness, procedures, and notification information.

4. Response

- a. Rapidly respond to confirmed reports no later than 48 hours with a goal of eliminating the entire sounder.
- b. Develop agreements with private landowners, tribal and first nations, and federal and state/provincial land management agencies allowing for monitoring and response actions prior to detection of feral swine.
- c. Promote and develop agreements and mechanisms for resource sharing such as use of helicopters, traps, and qualified individuals that may provide technical support.
- d. Pig sightings are often escapees from domestic pig operations of all varieties from commercial operations to backyard pens. These escapees can become feral very quickly if not promptly captured and returned. In cases where escapees become feral it is important to have the authority to eradicate and test the animals for diseases before they are allowed to breed.

5. Control and Management

- a. Promote and share response and management plans to promote consistency, to identify standard resources, and to facilitate communication between jurisdictions.
- b. As resources and level of effort allow, expand capacity for sample testing for disease and population metrics including opportunities to obtain data such as body weights, standard body measurements, sex, age, location, blood samples.
- c. Standardize data collection, storage, and data sharing between authoritative data sources.
- d. Clearly and consistently message the problems associated with allowing recreational hunters to control populations. In most instances, recreational hunting is not an effective approach to eliminate wild pig populations and there is evidence that it can make the problem worse.
- e. Identify and prioritize research needs to enhance management activities such as mapping of priority survey areas, and low-density eDNA testing.

Appendix A: Feral Swine Transboundary Workgroup Members

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*Participated on workgroup, unable to comment on recommendations.



MONTANA, WASHINGTON WORKING TOGETHER TO STOP CANADIAN WILD PIGS FROM SPREADING ACROSS BORDERS

DECEMBER 30, 2020

The Montana and Washington invasive species councils have joined forces to stop wild pigs from crossing borders.

The two councils issued a report with recommendations and best management practices aimed at helping federal, state, provincial and local landowners manage wild pigs in the western United States and Canada.

"Wild pig populations are expanding in the western provinces of Canada and in the United States," said Stephanie Criswell, coordinator of the Montana

Invasive Species Council. "We are at a unique point in time where we can work together to prevent Canadian wild pigs from spreading across borders into unaffected states like Montana."

Feral pigs resemble domestic pigs but are far more destructive. They prefer habitats with an abundant supply of water and dense cover. They are aggressive and may be extremely destructive to fields, fences and facilities. Their wallows can negatively impact ponds and wetlands. They can strip a field of crops in one night and pose a threat to ground-nesting birds and some endangered species. They also can transmit diseases and parasites, such as pseudorabies, brucellosis, and tuberculosis, to livestock and people.

"Feral swine are one of the most destructive invasive species in existence," continued Criswell. "Once established, they cause millions of dollars in agricultural, environmental and property damage. We do not want them in Montana and this effort was a key step in coordinating with neighboring states and provinces on the issue."

In early 2020, the two invasive species councils convened a working group of more than 40 federal, state and Canadian feral swine experts to discuss challenges and opportunities to prevent feral swine along interstate and international borders. Finalized this month, the report includes 22 recommendations that address five strategic areas of feral swine management.

Recommendations include standardizing communications to the public, expanding monitoring networks by partnering with non-traditional organizations such as hunting groups, and formalizing notification protocols for reports that will be shared between state and provincial authorities along the international border.

"Feral swine don't respect international borders or jurisdictions," said Justin Bush, coordinator of the Washington Invasive Species Council. "This process brought everyone in the neighborhood together to address this important issue."

The complete report Feral Swine Transboundary Workgroup Findings and Recommendations says: "Natural resource managers throughout North America have identified feral swine as a significant challenge. This invasive species has emerged as a major environmental and economic concern as populations have exploded. They exist across North America with population estimates over six million. Populations are expanding in the western provinces

of Canada and are on the rise in the United States. Existing data from the U.S. and Canada on the distribution of feral swine have confirmed that animals have been detected near the international border and the potential for transboundary movement is very possible.

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The Montana Invasive Species Council is a statewide partnership working to protect Montana's economy, natural resources and public health through a coordinated approach to combat invasive species.

Created in 2006, the Washington Invasive Species Council is tasked with providing policy-level direction, planning and coordination for combating harmful invasive species throughout the state and preventing the introduction of others that may be harmful.

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